

## CLAIMS

1. A method for a subscriber station registration in a broadcast  
2 communication system, comprising:  
    receiving a HSBS channel modulating a first frequency; and  
4      monitoring a timer status for the HSBS channel, and if the timer status is  
expired:  
6      performing a broadcast service registration with a sector  
transmitting the HSBS channel;  
8      setting status of the timer for the HSBS channel to enabled; and  
starting a timer for the HSBS channel.
2. The method as claimed in claim 1 wherein performing a broadcast  
2 service registration with a sector transmitting the HSBS channel further  
comprises:  
4      transmitting a paging identifier to the sector.
3. The method as claimed in claim 2 wherein transmitting a paging identifier  
2 to the sector further comprises:  
    transmitting an identifier of the HSBS channel monitored by the  
4 subscriber station to the sector.
4. The method as claimed in claim 2 wherein transmitting a paging identifier  
2 to the sector further comprises:  
    transmitting an identifier of the frequency monitored by the subscriber  
4 station to the sector.
5. The method as claimed in claim 1, further comprising setting timer status  
2 to expired for all HSBS channels upon power-up of the subscriber station.
6. A method for a subscriber station registration in a broadcast  
2 communication system, comprising:

- receiving a broadcast service registration from the subscriber station at a  
4 sector;  
adding a paging identifier to the subscribers' station paging set; and  
6 starting a timer for the paging identifier.
7. The method as claimed in claim 6, further comprising:  
2 monitoring a timer status of all paging identifiers for all subscriber  
stations' paging sets, and if a timer status of a paging identifier for a subscriber  
4 station is expired, then removing the paging identifier from the subscriber's  
station paging set.
8. The method as claimed in claim 6, further comprising adding an identifier  
2 for the frequency that the subscriber station monitors upon power-up to the  
subscribers' station paging set
9. The method as claimed in claim 6 wherein adding a paging identifier to  
2 the subscribers' station paging set comprises:  
adding an identifier of the HSBS channel monitored by the subscriber  
4 station to the subscribers' station paging set
10. The method as claimed in claim 6 wherein adding an identifier to the  
2 subscribers' station paging set comprises:  
adding an identifier of a frequency modulated by the HSBS channel  
4 monitored by the subscriber station to the subscribers' station paging set
11. A method for paging a subscriber station in a broadcast communication  
2 system, comprising:  
determining a status of the subscriber station's paging set;  
4 determining paging channels on which to page the subscriber station in  
accordance with the determined status of the subscriber station's paging set;  
6 and  
paging the subscriber station on all determined paging channels.

12. The method as claimed in claim 11 wherein said determining a status of the subscriber station's paging set comprises:

receiving at a subscriber station a HSBS channel modulating a first frequency;

monitoring at a subscriber station a timer status for the HSBS channel,

and if the timer status is expired, then:

performing a broadcast service registration with a sector

transmitting the HSBS channel;

setting status of the timer for the HSBS channel to enabled; and

starting a first timer for the HSBS channel;

receiving at the sector the broadcast service registration from the subscriber station;

adding at the sector a paging identifier to the subscribers' station paging set;

starting at the sector a second timer for the paging identifier;

monitoring at the sector a timer status of all paging identifiers for all subscriber stations' paging sets, and if a timer status of a paging identifier for a subscriber station is expired, then removing the paging identifier from the subscriber's station paging set.

13. The method as claimed in claim 11 wherein said determining a paging channel on which to page the subscriber station in accordance with the determined status of the subscriber station's paging set comprises:

determining frequencies on which to page the subscriber station in accordance with paging identifiers contained in the subscriber station paging set;

determining paging channels on which to page the subscriber station for each of the frequencies; and

paging the subscriber station on all determined paging channels.

14. The method as claimed in claim 11 wherein said determining a status of the subscriber station's paging set comprises:

transmitting from the subscriber station a first notification of a desire to receive a broadcast channel;

transmitting from the subscriber station a second notification a desire to  
 6 cease broadcast channel reception;  
     adding a paging identifier to the subscriber station paging set upon  
 8 receiving the first notification; and  
     removing the paging identifier from the subscriber station paging set  
 10 upon receiving the second notification.

15. The method as claimed in claim 14, further comprising:

2 transmitting from the sector permission to receive the broadcast channel  
 in response the first notification; and  
 4 receiving at the subscriber station the broadcast channel after receiving  
 the permission

16. The method as claimed in claim 11 wherein said determining a status of  
 2 the subscriber station's paging set comprises:

transmitting from the subscriber station a notification of a desire to  
 4 receive a broadcast channel modulating a second frequency different from the  
 first frequency monitored by the subscriber station;  
 6 removing an identifier of the first frequency from the subscriber station  
 paging set upon receiving the notification; and  
 8 adding an identifier of the first frequency to the subscriber station paging  
 set upon receiving the first notification.

17. The method as claimed in claim 16, further comprising:

2 transmitting from the sector permission to receive the broadcast channel  
 in response the first notification; and  
 4 receiving at the subscriber station the broadcast channel after receiving  
 the permission.

18. A method for paging a subscriber station in a broadcast communication  
 2 system, comprising:

modulating all frequencies of a sector with a broadcast channel;  
 4 determining paging channels on which to page the subscriber station for  
 each of the frequencies; and

6            paging the subscriber station on all determined paging channels.

19.    A method for paging a subscriber station in a broadcast communication  
2    system, comprising:

4            determining a frequency that the subscriber station monitors upon power-  
up;

6            determining all frequencies modulated by broadcast channels;

8            determining paging channels on which to page the subscriber station for  
each of the frequencies; and

8            paging the subscriber station on all determined paging channels.

20.    A method for paging a subscriber station in a broadcast communication  
2    system, comprising:

4            determining a frequency that the subscriber station monitors upon power-  
up, and if at least one broadcast channel is transmitted, then:

6            determining all frequencies modulated by the at least one broadcast  
channels to which the subscriber station is subscribed;

8            determining paging channels on which to page the subscriber station for  
each of the frequencies; and

8            paging the subscriber station on all determined paging channels.

21.    The method as claimed in claim 20, further comprising:

2            determining paging channel on which to page the subscriber station for a  
frequency that the subscriber station monitors upon power-up; and

4            paging the subscriber station on the determined paging channel if no  
broadcast channel is transmitted.

22.    A method for assigning frequencies to a subscriber station upon power-  
2    up in a broadcast communication system, comprising:

4            assigning a subscriber station to any of the frequencies transmitted by a  
sector in accordance with a hashing function if no broadcast channel is  
transmitted.

23.    The method as claimed in claim 22 further comprising:

- 2 assigning a subscriber station subscribed to a broadcast channel to the  
 frequencies transmitted by a sector modulated by the broadcast channel in  
 4 accordance with a hashing function if broadcast channel is transmitted.

24. A method for providing broadcast parameters in a broadcast  
 2 communication system, comprising:  
 receiving at each subscriber station in an idle state a first channel  
 4 containing a message;  
 decoding at each subscriber station a header of the message; and  
 6 decoding the remainder of the message only at the subscriber stations  
 interested in a broadcast service.

25. The method as claimed in claim 24 wherein said receiving at each  
 2 subscriber station in an idle state a first channel containing a message  
 comprises:  
 4 receiving at each subscriber station in an idle state a channel provided by  
 a communication system for overhead messages.

26. The method as claimed in claim 24 further comprising:  
 2 receiving at each subscriber station interested in a broadcast service in a  
 dedicated mode state a separate channel containing a message; and  
 4 decoding at the subscriber station the message.

27. The method as claimed in claim 26 wherein said receiving a first channel  
 2 containing a message at each subscriber station in an idle state comprises:  
 receiving at each subscriber station in an idle state a dedicated channel.

28. A method for providing broadcast parameters in a broadcast  
 2 communication system, comprising:  
 transmitting from a sector a message in a first channel;  
 4 receiving at each subscriber station in an idle state the first channel;  
 decoding at each subscriber station a header of the message;  
 6 decoding the remainder of the message only at the subscriber stations  
 interested in a broadcast service; and

8 failing to receive the first channel at each subscriber station in a  
dedicated mode.

29. The method as claimed in claim 28, wherein said transmitting from a  
2 sector a message in a first channel comprises:  
transmitting from the sector a channel provided by a communication  
4 system for overhead messages.

30. The method as claimed in claim 29, further comprising:  
2 transmitting from the sector a separate channel containing the message  
to each subscriber station interested in a broadcast service in a dedicated  
4 mode; and  
decoding the message at each subscriber station interested in a  
6 broadcast service in a dedicated mode.

31. The method as claimed in claim 30, wherein said transmitting from the  
2 sector a separate channel containing the message to each subscriber station  
interested in a broadcast service in a dedicated mode comprises:  
4 transmitting from the sector a dedicated channel.